

**WHAT IS CLAIMED IS:**

1. A microfluid driving device for bi-directional movement control, comprising:

A substrate;

A microchannel formed in said substrate to allow a fluid to flow inside said

5 microchannel;

A first Venturi pump connected to said microchannel to generate a pumping force in a first direction to said fluid in said microchannel, when an airflow is applied to said first Venturi pump;

A second Venturi pump connected to said microchannel to generate a pumping  
10 force in a second direction to said fluid in said microchannel, when an airflow is applied to said second Venturi pump; and

An airflow supply to be connected to said first and second Venturi pumps and to supply airflows to said first and/or second Venturi pumps.

2. The microfluid driving device according to claim 1, further comprising an airflow  
15 control component to control the supply of airflows to said first or second Venturi pump and the flow rate of said supplied airflows.

3. The microfluid driving device according to claim 1 or 2, wherein a fluid inlet is provided at a downstream position of the airflow channel of said first Venturi pump.

4. The microfluid driving device according to claim 1 or 2, further comprising at  
20 least one micro mixer, micro reactor and/or micro sensor in said microchannel.

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